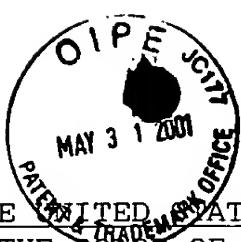


SOA-193



BOX AF

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2001
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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re the Patent Application of

G. CHACON

Serial No. 08/941,832

Filed: October 1, 1997

For: ELECTRONIC KANBAN WORK-SHEET
FOR THE DESIGN AND IMPLEMENTATION
OF VIRTUAL OR ELECTRONIC KANBAN
SYSTEM

Art Unit: 2123

Examiner: H. Jones

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JUN 5 2001
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TRANSMITTAL OF APPEAL BRIEF

Commissioner for Patents
BOX AF
Washington, D.C. 20231

Sir:

Three copies of an Appellant's Brief on Appeal for the above-referenced application are being filed herewith. The Commissioner is hereby authorized to charge \$310.00 to Deposit Account 18-0013 to cover the requisite fee under 37 C.F.R. 1.16 or 1.17 which may be required, or to credit any overpayment. The Notice of Appeal for this application was filed on April 2, 2001.

Respectfully submitted,

Dated: May 31, 2001

Ronald P. Kanánen
Reg. No. 24,104

Robert S. Green
Reg. No. 41,800

RADER, FISHMAN & GRAUER PLLC
1233 20th Street, N.W., Suite 501
Washington, D.C. 20036
Telephone: (202) 955-3750
Facsimile: (202) 955-3751
Customer No. 23353

1 of 3

SOA-193 (80000-054)

08/941,832

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

In the Patent Application of

G. CHACON

Serial No. 08/941,832

Filed: October 1, 1997

For: ELECTRONIC KANBAN WORK-SHEET FOR THE DESIGN AND IMPLEMENTATION OF VIRTUAL OR ELECTRONIC KANBAN SYSTEM



Group Art Unit: 2123

Examiner: H. Jones

#25
Appeal
Brief
7-18-01
JC

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JUN 5 2001

APPEAL BRIEF

Commissioner of Patents
BOX AF
Washington, DC 20231

Sir:

This is an Appeal Brief under 37 C.F.R. 1.192 appealing the final decision of the Examiner dated January 3, 2001 (Paper No. 21). Each of the topics required by 37 C.F.R. 1.192 is presented herewith and is labeled appropriately.

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I. Real Party in Interest

Sony Corporation of Tokyo, Japan ("Sony") and Sony Electronics, Inc. of Park Ridge, New Jersey (hereinafter collectively "Sony") are the real parties in interest of the present application. An assignment of all rights in the present application to Sony was executed by the

inventor and recorded by the U.S. Patent and Trademark Office at reel 9269, frame 0754.

II. Related Appeals and Interferences

Appellant is simultaneously appealing the final decision of the Examiner dated January 3, 2001 (Paper No. 19) in copending U.S. Patent Application 08/941,825 filed October 1, 1997.

III. Status of Claims

Claims 37-50 stand finally rejected. Claim 1 was amended and claims 2-3 were added by Preliminary Amendment filed April 14, 1998. Claim 1 was amended, claims 2-3 were canceled and claims 4-36 were added by Amendment filed November 10, 1999. Allowable claims 6, 8, 11, 12, 17, 19, 22, 29, 31 and 34 were placed in independent form and claims 1, 4, 5, 7, 9, 10, 13-16, 18, 20, 21, 23-28, 30, 32, 33, 35 and 36 were canceled by an Amendment filed March 31, 2000. The allowability of Claims 6, 8, 11, 12, 17, 19, 22, 29, 31 and 34 was withdrawn by the Examiner, and subsequently were canceled, and claims 37-50 were added by Amendment filed October 10, 2000. No claims are currently allowed.

Accordingly, the Appellant hereby appeals the final rejection of claims 37-50, which are presented in the Appendix.

IV. Status of Amendments

A Request for Reconsideration was filed subsequent to the final rejection of January 3, 2001. However, the Examiner found the arguments presented therein unpersuasive. No Amendment after the Final Rejection that is the subject of this Appeal was filed.

The claims in the Appendix represent the state of the claims as pending.

V. Summary of the Invention

The invention relates to a system and method for controlling a manufacturing production line using a virtual kanban system. The system includes a production scheduling model that includes the virtual kanban system. The virtual kanban system outputs an electronic kanban that represents a production routing schedule. A database 30 stores the production scheduling model and production line feedback data 21.

The feedback data comprises two data sets. The first data set specifies the equipment in the production line. The second data set specifies at least one of operating status of the equipment, product lot status and production input status.

A simulator 34 that simulates operation of the production line receives as input the electronic kanban and production line feedback data 21. The simulator determines the validity of the electronic kanban by running the simulator. If the electronic kanban is valid, the electronic kanban is output and a work schedule is generated.

In this manner, a production model generates the electronic kanban based on optimization and predetermined formula and rules. The electronic kanban is input to a simulator for verification. That is, the simulator 34 is a model of the production process, and is used to test the validity of the kanban. If the kanban is valid, the simulator outputs the kanban. Claim 41 recites a method for using the production model and the simulator described above.

Thus, the production model generates an electronic kanban for input to a simulator prior to release of the electronic kanban to, for example, a production process. According to the specification at page 16, line 23 to page 17, line 14, the scheduler 32 performs simulation runs on the production model using the kanban worksheets. The kanban worksheets are virtual, or electronic, and are generated using a Kanban Design Module and stored in the scheduler database 30. See page 4, lines 22 – 23, Fig. 2, page 16, line 23 to page 18, line 3 and Fig. 10.

Appellant is not claiming a simulation of a kanban system, nor the unity of the kanban with the simulator. Rather, the production model generates an electronic kanban for input to a simulator prior to release of the electronic kanban to, for example, a production process.

According to the specification at page 16, line 23 to page 17, line 14, the scheduler 32 performs simulation runs on the production model using the kanban worksheets. The kanban worksheets are virtual, or electronic, and are generated using a Kanban Design Module and stored in the scheduler database 30. See page 4, lines 22 – 23 and Fig. 2.

VI. Issues

The issues presented for consideration in this appeal are as follows:

- (1) Whether the Examiner erred in rejecting claims 37-50 under 35 U.S.C. §112, second paragraph for allegedly being incomplete by omitting essential elements amounting to a gap between the elements (first instance)?
- (2) Whether the Examiner erred in rejecting claims 37-50 under 35 U.S.C. §112, second paragraph for allegedly being incomplete by omitting essential elements amounting to a gap between the elements (second instance)?
- (3) Whether the Examiner erred in rejecting claims 37-50 under 35 U.S.C. §112, second paragraph for allegedly being incomplete by omitting essential elements amounting to a gap between the elements (third instance)?
- (4) Whether the Examiner erred in rejecting claims 37-50 under 35 U.S.C. §102(a) as being anticipated by De Toni et al., An Artificial, Intelligence-Based production Scheduler, Integrated Manufacturing Systems, vol. 7, No. 3, 1996, 17-25 (De Toni et al.)?
- (5) Whether the Examiner erred in rejecting claims 37-50 under 35 U.S.C. §102(a) as being anticipated by U. S. Patent 5, 544, 348 to Umeda et al. (Umeda et al. '348)?
- (6) Whether the Examiner erred in rejecting claims 37-50 under 35 U.S.C. §102(a) as being anticipated by Seppanen, Kanban Simulator Using Siman and Lotus 1-2-3, IEEE Winter Simulation Conference Proceedings, 1993, 838-844 (Seppanen)?
- (7) Whether the Examiner erred in rejecting claims 37-50 under 35 U.S.C. §102(a) as

being anticipated by Wiwakanond et al., Simulation of Electronics Manufacturing Systems With Two-Card Kanban, Proceedings of the Twenty-Eighth Southeastern Symposium on System Theory, 1996, 391-395 (Wiwakanond et al.)?

- (8) Whether the Examiner erred in rejecting claims 37-50 under 35 U.S.C. §102(a) as being anticipated by Corbett et al., Modeling Just-in-Time Production Systems, IEEE Winter Simulation Conference Proceedings, 1993, 819-828 (Corbett et al.)?
- (9) Whether the Examiner erred in rejecting claims 37-50 under 35 U.S.C. §102(a) as being anticipated by U.S. Patent 5,398,336 to Tantry et al. (Tantry et al.)?
- (10) Whether the Examiner erred in rejecting claims 37-50 under 35 U.S.C. §102(a) as being anticipated by U.S. Patent 4,866,628 to Natarajan (Natarajan)?
- (11) Whether the Examiner erred in rejecting claims 37-50 under 35 U.S.C. §102(a) as being anticipated by U.S. Patent 5,369,570 to Parad (Parad)?
- (12) Whether the Examiner erred in rejecting claims 37-50 under 35 U.S.C. §102(a) as being anticipated by U.S. Patent 5,247,447 to Korncoff et al. (Korncoff et al.)?
- (13) Whether the Examiner erred in rejecting claims 37-50 under 35 U.S.C. §102(a) as being anticipated by U.S. Patent 5,446,671 to Weaver et al. (Weaver et al.)?
- (14) Whether the Examiner erred in rejecting claims 37-50 under 35 U.S.C. §102(a) as being anticipated by U.S. Patent 5,089,970 to Lee et al. (Lee et al.)?
- (15) Whether the Examiner erred in rejecting claims 37-50 under 35 U.S.C. §102(a) as being anticipated by Liberatore et al., Dynamic Allocation of Kanbans in a Manufacturing System Using Perturbation Analysis, Proceedings of the 1995 INRIA/IEEE Symposium on Emerging Technologies in Factory Automation, 1995, 595-603 (Liberatore et al.)?
- (16) Whether the Examiner erred in rejecting claims 37-50 under 35 U.S.C. §102(a) as being anticipated by Jain et al., Expert Simulation For On-line Scheduling, 1989 IEEE Winter Simulation Conference Proceedings, 1989, 930-935 (Jain et al.)?
- (17) Whether the Examiner erred in rejecting claims 37-50 under 35 U.S.C. §102(a) as

- being anticipated by Roberts et al., Object Oriented Simulation Tools Necessary For a Flexible Batch Process Management Architecture, Proceeding of the 1991 IEEE Winter Simulation Conference, 1991, 323-330 (Roberts et al.)?
- (18) Whether the Examiner erred in rejecting claims 37-50 under 35 U.S.C. §102(a) as being anticipated by Umeda, A Manufacturing-Oriented Simulation Package to Support Systems Planning and Its Operation, Proceeding of the 1992 IEEE Winter Simulation Conference, 1992, 892-898 (Umeda)?
- (19) Whether the Examiner erred in rejecting claims 37-50 under 35 U.S.C. §102(a) as being anticipated by Bouchentouf-Idriss et al., Designing a Kanban Manufacturing System Using the Server Network Generator (SNG) CASE Tool, Proceedings of APL '91, ACM 1991, 62-70 (Bouchentouf-Idriss et al.)?
- (20) Whether the Examiner erred in rejecting claims 37-50 under 35 U.S.C. §102(a) as being anticipated by Harmonosky, Simulation-based Real-time Scheduling: Review of Recent Developments, Proceedings of the 1995 Winter Simulation Conference, IEEE 1995, 220-225 (Harmonosky)?
- (21) Whether the Examiner erred in rejecting claims 37-50 under 35 U.S.C. §102(a) as being anticipated by Marriott, Production Scheduling Systems Using PROVISA, Proceedings of the 1994 Winter Simulation Conference, IEEE 1994, 522-526 (Marriott)?
- (22) Whether the Examiner erred in rejecting claims 37-50 under 35 U.S.C. §102(a) as being anticipated by Krishnamurthi, Domain-based On-line Simulation for Real-time Decision Support, Proceedings of the 1993 Winter Simulation Conference, IEEE 1993, 1304-1312 (Krishnamurthi et al.)?
- (23) Whether the Examiner erred in rejecting claims 37-50 under 35 U.S.C. §102(a) as being anticipated by Manivannan et al., Real-time Control of a Manufacturing Cell Using Knowledge-based Simulation, Proceedings of the 1991 Winter Simulation Conference, IEEE 1991, 251-260 (Manivannan et al.)?

Each of these issues will be discussed in turn.

VII. Grouping of Claims

- (1) Claims 37-40 stand or fall together with respect to the §112, second paragraph rejections, first instance;
- (2) Claims 41-50 stand or fall together with respect to the §112, second paragraph rejections, first instance;
- (3) Claims 37-40 stand or fall together with respect to the §112, second paragraph rejections, second instance;
- (4) Claims 41-50 stand or fall together with respect to the §112, second paragraph rejections, second instance;
- (5) Claims 37-40 stand or fall together with respect to the §112, second paragraph rejections, third instance;
- (6) Claims 41-50 stand or fall together with respect to the §112, second paragraph rejections, third instance;
- (7) Claims 37-40 stand or fall together with respect to each of the §102 rejections over
 - a.) De Toni et al.;
 - b.) Umeda et al. '348;
 - c.) Seppanen;
 - d.) Wiwakanond et al.;
 - e.) Corbett et al.;
 - f.) Tantry et al.;
 - g.) Natarajan;
 - h.) Parad;
 - i.) Korncoff et al.;

- j.) Weaver et al.;
 - k.) Lee et al.;
 - l.) Liberatore et al.;
 - m.) Jain et al.;
 - n.) Roberts et al.;
 - o.) Umeda;
 - p.) Bouchentouf-Idriss et al.;
 - q.) Harmonosky;
 - r.) Marriott;
 - s.) Krishnamurthi et al.; and
 - t.) Manivannan et al.; and
- (8) Claims 41-50 stand or fall together with respect to each of the §102 rejections over
- a.) De Toni et al.;
 - b.) Umeda et al. '348;
 - c.) Seppanen;
 - d.) Wiwakanond et al.;
 - e.) Corbett et al.;
 - f.) Tantry et al.;
 - g.) Natarajan;
 - h.) Parad;
 - i.) Korncoff et al.;
 - j.) Weaver et al.;
 - k.) Lee et al.;
 - l.) Liberatore et al.;
 - m.) Jain et al.;
 - n.) Roberts et al.;

- o.) Umeda;
- p.) Bouchentouf-Idriss et al.;
- q.) Harmonosky;
- r.) Marriott;
- s.) Krishnamurthi et al.; and
- t.) Manivannan et al.

The arguments set forth in the following section provide reasons why each of these groups is considered separately patentable. 37 C.F.R. 1.192(c)(7).

VIII. Arguments

In the Final Office Action of January 3, 2001 (Paper No. 21), the following rejections were presented by the Examiner:

- (i) 35 U.S.C. §112, first paragraph

None

- (ii) 35 U.S.C. §112, second paragraph

- (1) The Examiner rejected claims 37-50 under 35 U.S.C. §112, second paragraph for allegedly being incomplete by omitting essential elements amounting to a gap between the elements (first instance);
- (2) The Examiner rejected claims 37-50 under 35 U.S.C. §112, second paragraph for allegedly being incomplete by omitting essential elements amounting to a gap between the elements (second instance);
- (3) The Examiner rejected claims 37-50 under 35 U.S.C. §112, second paragraph (third instance);

- (iii) 35 U.S.C. §102

- (1) The Examiner rejected claims 37-50 under 35 U.S.C. §102(a) as being anticipated by De Toni et al.;
- (2) The Examiner rejected claims 37-50 under 35 U.S.C. §102(a) as being anticipated by Umeda et al. '348;
- (3) The Examiner rejected claims 37-50 under 35 U.S.C. §102(a) as being

- anticipated by Seppanen;
- (4) The Examiner rejected claims 37-50 under 35 U.S.C. §102(a) as being anticipated by Wiwakanond et al.;
- (5) The Examiner rejected claims 37-50 under 35 U.S.C. §102(a) as being anticipated by Corbett et al.;
- (6) The Examiner rejected claims 37-50 under 35 U.S.C. §102(a) as being anticipated by Tantry et al.;
- (7) The Examiner rejected claims 37-50 under 35 U.S.C. §102(a) as being anticipated by Natarajan;
- (8) The Examiner rejected claims 37-50 under 35 U.S.C. §102(a) as being anticipated by Parad;
- (9) The Examiner rejected claims 37-50 under 35 U.S.C. §102(a) as being anticipated by Korncoff et al.;
- (10) The Examiner rejected claims 37-50 under 35 U.S.C. §102(a) as being anticipated by Weaver et al.;
- (11) The Examiner rejected claims 37-50 under 35 U.S.C. §102(a) as being anticipated by Lee et al.;
- (12) The Examiner rejected claims 37-50 under 35 U.S.C. §102(a) as being anticipated by Liberatore et al.;
- (13) The Examiner rejected claims 37-50 under 35 U.S.C. §102(a) as being anticipated by Jain et al.;
- (14) The Examiner rejected claims 37-50 under 35 U.S.C. §102(a) as being anticipated by Roberts et al.;
- (15) The Examiner rejected claims 37-50 under 35 U.S.C. §102(a) as being anticipated by Umeda;
- (16) The Examiner rejected claims 37-50 under 35 U.S.C. §102(a) as being anticipated by Bouchentouf-Idriss et al.;

- (17) The Examiner rejected claims 37-50 under 35 U.S.C. §102(a) as being anticipated by Harmonosky;
 - (18) The Examiner rejected claims 37-50 under 35 U.S.C. §102(a) as being anticipated by Marriott;
 - (19) The Examiner rejected claims 37-50 under 35 U.S.C. §102(a) as being anticipated by Krishnamurthi et al.; and
 - (20) The Examiner rejected claims 37-50 under 35 U.S.C. §102(a) as being anticipated by Manivannan et al.
- (iv) 35 U.S.C. §103
- None.
- (v) Other
- None

For at least the following reasons, Appellant submits that these rejections are both technically and legally unsound and should therefore be reversed.

(ii)(1) §112, second paragraph, first occurrence

According to Paragraph 4 of the Office Action, claims 37-50 are rejected under 35 U.S.C. §112, second paragraph as being incomplete for omitting allegedly essential elements, such omission allegedly amounting to a gap between the elements. Appellant respectfully traverses this rejection.

The Office Action states that “the simulator has not been described,” that the “production scheduling model...has not been described,” and that the “virtual/electronic Kanban...has not been described,” and cites MPEP § 2172.01.

Appellant notes that this is not a proper §112, second paragraph rejection, which would address indefiniteness. MPEP §2172.01, which is cited in the Office Action for authority, exclusively addresses §112, first paragraph rejections. Accordingly, Appellant is uncertain what the Office Action is stating, thereby making this rejection confusing, and accordingly this rejection is improper, and should not be sustained.

In order to advance prosecution, Appellant in its Request for Reconsideration addressed and traversed this rejection under either §112, first or second paragraphs. These arguments are presented here.

The requirements of §112, first and second paragraphs are separate and distinct. A claim is not required to enable one of ordinary skill in the art to make and use the invention to be considered definite under §112, second paragraph. Rather, the specification is required to “describe the invention...in such detail as to enable a person skilled in the most relevant art to make and use it.” See In re Naquin, 398 F.2d 863, 158 USPQ 317, 319 (C.C.P.A. 1968)(citing International Standard Elec. Corp. v. Ooms, 157 F.2d 73, 70 USPQ 32 (D.C. Cir. 1946)).

Furthermore, a claim is not required to provide a written description of the invention to be considered definite under §112, second paragraph. Rather, the specification is required to describe the invention so that “persons of ordinary skill in the art will recognize from the disclosure that appellants invented processes including those limitations.” See In re Wertheim,

541 F.2d 257, 191 USPQ 90, 96 (C.C.P.A. 1976)(citing In re Smythe, 480 F.2d 1376, 1383, 178 USPQ 279, 284 (C.C.P.A. 1973)). See also Forssmann v. Matsuo, 23 USPQ 2d 1548, 1550 (B.P.A.I. 1992) and Miles Lab., Inc. v Shandon Inc., 997 F.2d 870, 27 USPQ 2d 1123 (Fed. Cir. 1993). The Federal Circuit also instructs that claims are not required to provide a written description of the invention. See Orthokinetics Inc. v. Safety Travel Chairs Inc., 806 F.2d 1565, 1 USPQ 2d 1081 (Fed. Cir. 1986).

Claims 37-50 are complete, and contain all the essential elements required of patent claims. The simulator is described variously throughout the specification, for example, in Fig. 2 and at page 5, lines 5-20. The production scheduling model is described variously throughout the specification, for example, in Fig. 2 and at page 6, lines 6-10. The virtual/electronic Kanban is described variously throughout the specification, for example, at page 17, lines 5-21.

Accordingly, the rejection that pending claims 37-50 are incomplete for allegedly omitting essential elements, and that these alleged omissions do not describe certain components, cannot be sustained.

Furthermore, this rejection addresses both apparatus claims 37-40 and method claims 41-50. Appellant further assumes that this rejection was meant to apply only to apparatus claims 37-40, and believes that this is a reasonable and valid assumption. However, because the rejection as stated addresses both apparatus and method claims, this rejection is vague and therefore improper and should not be sustained.

Even if this rejection was meant to address method claims, Appellant is not aware of ANY requirement that method claims must describe structural elements. Accordingly, the final rejection of claims 37-50 is improper and should not be sustained.

(ii)(2) §112, second paragraph, second occurrence

According to Paragraph 5 of the Office Action, claims 37-50 are rejected under 35 U.S.C. §112, second paragraph as being incomplete for omitting allegedly essential elements, such omission allegedly amounting to a gap between the elements. Appellant respectfully traverses this rejection.

The Office Action states that a.) the steps of the simulation have not been described, b.) that how the step of determination of the validity of the Kanban is done is not described, c.) how the manufacturing line is controlled is not described, and d.) for claim 37, the Office Action asks what happens if the Kanban is not determined to be valid. The Office Action also cites MPEP § 2172.01 for authority.

Appellant notes that this is not a proper §112, second paragraph rejection, which would address indefiniteness. Additionally, MPEP §2172.01, which is cited by the examiner for authority, exclusively address §112, first paragraph rejections. Accordingly, Appellant is uncertain what the Office Action is stating, thereby making this rejection confusing, and accordingly this rejection is improper, and should not be sustained.

In order to advance prosecution, Appellant in its Request for Reconsideration addressed and traversed this rejection under either §112, first or second paragraphs. These arguments are presented here.

The requirements of §112, first and second paragraphs are separate and distinct. A claim is not required to enable one of ordinary skill in the art to make and use the invention to be considered definite under §112, second paragraph. Rather, the specification is required to "describe the invention...in such detail as to enable a person skilled in the most relevant art to make and use it." See In re Naquin, 398 F.2d 863, 158 USPQ 317, 319 (C.C.P.A. 1968)(citing International Standard Elec. Corp. v. Ooms, 157 F.2d 73, 70 USPQ 32 (D.C. Cir. 1946)).

Furthermore, a claim is not required to provide a written description of the invention to be considered definite under §112, second paragraph. Rather, the specification is required to

describe the invention so that “persons of ordinary skill in the art will recognize from the disclosure that appellants invented processes including those limitations.” See In re Wertheim, 541 F.2d 257, 191 USPQ 90, 96 (C.C.P.A. 1976)(citing In re Smythe, 480 F.2d 1376, 1383, 178 USPQ 279, 284 (C.C.P.A. 1973)). See also Forssmann v. Matsuo, 23 USPQ 2d 1548, 1550 (B.P.A.I. 1992) and Miles Lab., Inc. v Shandon Inc., 997 F.2d 870, 27 USPQ 2d 1123 (Fed. Cir. 1993). The Federal Circuit also instructs that claims are not required to provide a written description of the invention. See Orthokinetics Inc. v. Safety Travel Chairs Inc., 806 F.2d 1565, 1 USPQ 2d 1081 (Fed. Cir. 1986).

Furthermore, this rejection addresses both apparatus claims 37-40 and method claims 41-50. Appellant assumes that this rejection was meant to apply only to the method claims 41-50. Since the text of the rejection appears to refer only to “steps”, Appellant believes that this is a reasonable and valid assumption. It would make no sense to reject apparatus claims for lacking method steps. However, because the rejection as stated addresses both apparatus and method claims, this rejection is vague and therefor improper, and should not be sustained.

Claims 37-50 are complete, and contain all the essential elements required of patent claims. Addressing “simulation” in a.) above: Claim 41 recites the step of “inputting the electronic kanban and the feedback data to a simulator and simulating the manufacturing production line.” Support for this step can be found variously in the specification, for example, at page 5, lines 5-20. This is a step recited in the claim, and meets all claim structure requirements. Detailed steps of the simulation need not be recited in the claim. Appellant believes that the allegation that “the steps [of the simulation] have not been described” is wholly without merit or support, and should not be sustained.

Addressing how the validity of the kanban is determined in b.) above, Claim 41 recites the step of “determining the validity of the kanban.” Support for this step can be found variously in the specification, for example, at page 5, lines 5-20. This step meets all claim structure requirements. Appellant is claiming the step of determining the validity of the kanban: the preferred embodiment of how this is done can be found in the specification, for example, at page

5, lines 5-20. Accordingly, there is no omission amounting to a gap between any steps, and Appellant believes that this allegation is wholly without merit or support, and should not be sustained.

Addressing the allegation that how the manufacturing line is controlled is omitted in c.) above, Appellant does not understand what the Examiner is alleging. The preamble of claim 41 recites “A method for controlling a manufacturing production line....” Support for this preamble is the specification. How the manufacturing production line is controlled is recited in the steps recited in the body of the claim. Accordingly, there is no omission amounting to a gap between any steps, and this allegation is wholly without merit or support, and should not be sustained.

Addressing the allegation that, regarding claim 37 in d.) above, the Office Action asks the question what happens if the Kanban is not determined to be valid. No statement of rejection was presented. Appellant does not see a reason for this rejection. Claim 37 is an apparatus claim, and this portion of the rejection is improper for failing to state the rejection with specificity and therefor there is no rejection requiring a response. Even if this portion of the rejection is interpreted by the Appellant as applying to claim 41, it is outside the scope of claim 41, because claim 41 recites the step of “determining the validity of the electronic kanban.” To address the situation when the kanban is determined to be invalid, the Examiner was direct to dependent claim 43.

Accordingly, the Office Action rejection that the pending claims 37-50 are incomplete for allegedly omitting essential elements, and that these alleged omissions do not describe certain components, is improper and should not be sustained.

(ii)(3) §112, second paragraph, third occurrence

According to Paragraph 6 of the Office Action, the Office Action alleges that with regards to claims 37-50 “...it is unclear what method/process applicant is intending to encompass”, and further alleges that “There are no limitations directed at anything more than a generation of a schedule.” Appellant believes that no rejection has been stated by the Examiner, merely an opinion.

In order to advance prosecution, Appellant in its Request for Reconsideration addressed and traversed this rejection under either §112, first or second paragraphs. These arguments are presented here.

Accordingly, Appellant disagrees with the examiner’s opinion, and traverses the rejection.

The requirements of §112, first and second paragraphs are separate and distinct. A claim is not required to enable one of ordinary skill in the art to make and use the invention to be considered definite under §112, second paragraph. Rather, the specification is required to “describe the invention...in such detail as to enable a person skilled in the most relevant art to make and use it.” See In re Naquin, 398 F.2d 863, 158 USPQ 317, 319 (C.C.P.A. 1968)(citing International Standard Elec. Corp. v. Ooms, 157 F.2d 73, 70 USPQ 32 (D.C. Cir. 1946)).

Furthermore, a claim is not required to provide a written description of the invention to be considered definite under §112, second paragraph. Rather, the specification is required to describe the invention so that “persons of ordinary skill in the art will recognize from the disclosure that appellants invented processes including those limitations.” See In re Wertheim, 541 F.2d 257, 191 USPQ 90, 96 (C.C.P.A. 1976)(citing In re Smythe, 480 F.2d 1376, 1383, 178 USPQ 279, 284 (C.C.P.A. 1973)). See also Forssmann v. Matsuo, 23 USPQ 2d 1548, 1550 (B.P.A.I. 1992) and Miles Lab., Inc. v Shandon Inc., 997 F.2d 870, 27 USPQ 2d 1123 (Fed. Cir. 1993). The Federal Circuit also instructs that claims are not required to provide a written

description of the invention. See Orthokinetics Inc. v. Safety Travel Chairs Inc., 806 F.2d 1565, 1 USPQ 2d 1081 (Fed. Cir. 1986).

Claims 37-40 are apparatus claims reciting a system for controlling a manufacturing production line. Claims 41-50 are method claims reciting a method for controlling a manufacturing production line. Support for manufacturing production line can be found variously within the specification, for example, at page 3, lines 8-15. The Office Action alleges that the claims do not set forth any steps involved in the method/process. With respect to claims 37-40, this is correct, as they are apparatus claims and do not recite nor require that steps be recited. With respect to claims 41-50, the “use” is recited in the preamble, while the steps are recited in the body of the claim.

Accordingly, the structure and format of the claims are in fact proper and complete. Accordingly, **ANY §112, first or second paragraph rejection which may be read from paragraph 6 of the Office Action is traversed, and is improper and should not be sustained.**

(iii) 35 U.S.C. §102

The Examiner rejected claims 37-50 reciting twenty (20) separate 35 U.S.C. §102 rejections. Furthermore, the examiner has attempted to introduce more than twenty-two (22) references that are not of record. All of these rejections are traversed, and none of these rejections should be sustained.

The Board has previously stated “[i]t seems necessary to apply … from time to time the maxim that one cannot make omelettes of bad eggs – no matter how many are used. One good reference is better than 50 poor ones, and the 50 do not make the one any better.” Ex parte Blanc, 13 USPQ2d 1383, 1384 (Bd. Pat. App. & Int’l 1989), repeating a statement from In re Herrick, 344 F.2d 713, 145 USPQ 400 (CCPA 1965), quoting Ball and Roller Bearing Co. v. F.C. Sanford Mfg. Co., 297 F. 163, 167 (2d Cir. 1924).

Patent Office regulation for rejection of claims, 37 C.F.R. 1.104(c) (formerly Rule 106(b)) states that:

... the examiner must cite the best references at his command.
When a reference is complex or shows or describes inventions other than that claimed by the applicant, the particular part relied on must be designated as nearly as practicable. The pertinence of each reference, if not apparent, must be clearly explained and each rejected claim specified.

Accordingly, Appellant objects to the Examiner applying **20 references** in §102 rejections as not having applied the best references. Furthermore, in none of the §102 rejections discussed below did the Examiner state the particular part of the reference relied upon for each claim element or each claim specified. Accordingly, all §102 rejections should not be sustained.

Additionally, 35 U.S.C. §132 requires that an examiner include in the action reasons for any rejection, objection or requirement. See also 37 C.F.R. §§1.104(b), 1.104(c), 1.106, 1.107. A claim rejection by the examiner violates Section 132 if it “is so uninformative that it prevents the applicant from recognizing and seeking to counter the grounds for rejection.” Chester v. Miller, 906 F.2d 1574, 1578, 15 USPQ2d 1333, 1337 (Fed. Cir. 1990). Cf Ex parte Blanc, 13 USPQ2d 1383, 1384 (Bd. Pat. App. & Int’l 1989) (the examiner rejected the claims “as obvious from each one of Hirao, Lundell, Rekers and Taylor, each considered alone or further with one of Coran, Floyd and Proux, optionally further considering one of Johnson [sic Johnston] and Williams”; ‘the examiner’s statement of rejection includes no fewer than 40 separate rejections....By setting forth such a broad-brush statement and by failing to explain with a reasonable degree of specificity any one rejection, the examiner has failed, procedurally, to establish a prima facie case of obviousness.”). See In re Portola Packaging, Inc., 110 F.3d 786, 790, 42 USPQ 1295, 1299 (Fed. Cir. 1997), reh’g denied and suggestion for reh’g in banc declined, 122 F.3d 1473, 44 USPQ2d 1060 (Fed. Cir. 1997)(“The regulations that prescribe an examiner’s conduct indicate that, in conducting an examination, an examiner must evaluate each

cited reference and then determine which of those references, alone or in combination, provides the most appropriate statutory ground for rejecting the claims. See 37 C.F.R. §1.106(b) ('In rejecting claims for want of novelty or for obviousness, the examiner must cite the best references at his command.'"). Accordingly, all §102 rejections should not be sustained.

In the Office Action at paragraph 7, the examiner's interpretation of the claims is presented. This interpretation alleges that the invention is the "real-time optimization of a production routing schedule using feedback as input to a simulator." Additionally, the interpretation in the Office Action further alleges that the electronic/virtual Kanban is the "electronic tracking of items in a manufacturing line." Lastly, the Office Action states that these concepts have allegedly been disclosed in the prior art.

Appellant disagrees with the interpretations offered in the Office Action, as the claims must be "given the broadest reasonable interpretation consistent with the specification." MPEP §2111.

Appellants' summary of the invention is given in section V. Summary of the Invention, above. The Examiner's interpretation is incomplete and, consequently, inaccurate, unwarranted, misleading, and inconsistent with the claim language and the specification. The claim language in unambiguous and the elements of each claim is clear on its face.

In order to establish prima facie anticipation, the claims must be correctly construed by the Examiner to define the scope and meaning of each contested limitation. In re Paulsen, 30 F.3d 1475, 1479, 31 USPQ 2d 1671, 1674 (Fed. Cir. 1994).

The Examiner has not correctly construed the scope and meaning of the claims, as evidenced by the erroneous interpretation above. Accordingly, ALL of the §102 rejections are based on an erroneous and misleading claim interpretation, and consequently none of the §102 rejections should be sustained.

For the procedural reasons stated above, and for all the procedural and substantive reasons addressing each rejection individually below, all of the §102 rejections should not be sustained.

(iii)(1) 35 U.S.C. §102

The Office Action rejected claims 37-50 under 35 U.S.C. §102(a) as being anticipated by De Toni et al. in paragraphs 9-10 of the Office Action. Appellant respectfully traverses this rejection.

The Examiner has the burden of presenting a prima facie case of anticipation. See In re King, 801 F.2d 1324, 1327, 231 USPQ 136, 138-139 (Fed. Cir. 1986); In re Wilder, 429 F.2d 447, 450, 166 USPQ 545, 548 (C.C.P.A. 1970). Additionally, the claim must first be correctly construed to define the scope and meaning of each contested limitation. See In re Paulsen, 30 F.3d 1475, 1479, 31 USPQ 2d 1671, 1674 (Fed. Cir. 1994). As discussed above, the Examiner has incorrectly construed the claims to define their scope and meaning. Accordingly, this rejection is improper and the rejection should not be sustained.

Additionally, the Examiner is attempting to apply, in a §102 rejection, no less than 15 references that are not of record and have not been supplied to the Appellant. The Examiner introduces these additional references by referring to the various citations contained within De Toni et al., in support of the various elements within De Toni et al. A request was made by the Appellant to the Examiner to supply to the Applicant all references cited or applied in Paragraph 9 of the Office Action, or withdraw this rejection. This request was never acted upon by the Examiner. Accordingly, this rejection is an improper §102 rejection and should not be sustained.

Furthermore, the rejection is not phrased in such a manner that can be interpreted as a proper rejection. The Examiner has not identified all the elements in the claims 37-50, nor has the Examiner shown, with specificity, where in the reference each element of Applicant's invention is allegedly disclosed. It is incumbent upon the Examiner to identify where in the reference each element may be found. Ex parte Levy, 17 U.S.P.Q.2d 1461 (BPAI 1990). Reference to additional references not of record is NOT a showing of specificity within the reference. Accordingly, this rejection is improper, and should not be sustained.

De Toni et al. discloses an artificial, intelligence-based production scheduler. The article discloses that the authors have “developed an expert system for scheduling in make-to-order firms.” The expert system is a production scheduler with model-based reasoning. The main field of applicability is stated as being made to order firms. The scheduler uses a hybrid push/pull approach to schedule and “exploits the expert system technology in order to obtain satisfactory solutions.” De Toni discloses a version of just-in-time manufacturing, known as Kanban. At page 19, De Toni et al. disclose “simulation mode,” and state that “for each customers order aggregation, a work centre loading is simulated as a consequence of the release of customer orders of that aggregation, in the form of production orders at each work centre.” This simulator, by its very nature, is the Kanban generating the schedule.

The simulator of De Toni is NOT the simulator recited in claims 37 and 41, which simulates operation of the production line and receives as input the electronic kanban from the production scheduling model.

A document can only anticipate a claim if the document discloses, explicitly or implicitly, each and every feature recited in the claim. Verdegall Bros. v. Union Oil Co. of Calif., 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). Since De Toni et al. fails to disclose, either explicitly or implicitly, at least the above-noted feature recited in independent claims 37 and 41, De Toni et al. cannot anticipate these claims. At least in view of the foregoing, claims 37 and 41 are allowable, and the rejection should not be sustained. Claims 38-40, depending from claim 37 and claims 42-50 depending from claim 41, are allowable as depending from allowable base claims, as well as the additional features they recite, particularly within the claimed combination. Accordingly, a *prima facie* case of anticipation has not been established, and the rejection should not be sustained.

(iii)(2) 35 U.S.C. §102

The Office Action rejects claims 37-50 under 35 U.S.C. §102(a) as being anticipated by U.S. Patent 5,554,348 to Umeda et al.

Umeda et al. '348 discloses a simulation technique suitable for processing discrete events in a production system. To accomplish this, a general purpose simulator models the production process that can be defined with a material requirement calculation program (push-type) or a kanban system (pull-type) as an incorporated model. In this manner, a production process simulator outputs production process parameters to the kanban model. See col. 2, lines 33-63, col. 3, lines 3-43. This is a simulation of a kanban system.

Umeda '348 does not disclose, teach or suggest a simulator that simulates operation of the production line and determines validity of the electronic kanban, the simulator receiving as input the electronic kanban from the production scheduling model and production line feedback data from the database. Additionally, Umeda '348 does not disclose, teach or suggest determining the validity of the kanban by the simulator, nor the output of the kanban following determination of its validity by the simulator.

A document can only anticipate a claim if the document discloses, explicitly or implicitly, each and every feature recited in the claim. Verdegall Bros. v. Union Oil Co. of Calif., 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). Since Umeda '348 fails to disclose, either explicitly or implicitly, at least the above-noted features recited in independent claims 37 and 41, Umeda '348 cannot anticipate these claims. At least in view of the foregoing, claims 37 and 41 are allowable, and the rejection should not be sustained. Claims 38-40, depending from claim 37 and claims 42-50 depending from claim 41, are allowable as depending from allowable base claims, as well as the additional features they recite, particularly within the claimed combination. Accordingly, a prima facie case of anticipation has not been established, and the rejection should not be sustained.

Furthermore, the rejection is not phrased in such a manner that can be interpreted as a

proper rejection. The Examiner has not identified all the elements in the claims 37-50, nor has the Examiner shown, with specificity, where in the reference each element of the claims are allegedly disclosed. The Office Action states “See entire disclosure and particularly: abstract; figs. 1-15; col. 1, lines 42-55;” and col. 3, lines 1-67, col. 10, lines 1-67 and col. 18, lines 10-67. It is incumbent upon the Examiner to identify where in the reference each element may be found. Ex parte Levy, 17 U.S.P.Q.2d 1461 (BPAI 1990). Referring to 15 figures and to either entire columns or major portions of columns is **NOT** a showing of specificity within the reference. Accordingly, this rejection is improper, and should not be sustained.

(iii)(3) 35 U.S.C. §102

Seppanen (IEEE, 1993) discloses a kanban simulator. As stated in the abstract, “Both a traditional “Push” and a “Kanban” or “Pull” mode of production control were...simulated with an ability to switch between the two modes.” This is a production control simulator that can include a kanban model.

Seppanen (IEEE, 1993) does not disclose, teach or suggest a simulator that simulates operation of the production line and determines validity of the electronic kanban, the simulator receiving as input the electronic kanban from the production scheduling model and production line feedback data from the database. Additionally, Seppanen (IEEE, 1993) does not disclose, teach or suggest determining the validity of the kanban by the simulator, nor the output of the kanban following determination of its validity by the simulator.

A document can only anticipate a claim if the document discloses, explicitly or implicitly, each and every feature recited in the claim. Verdegall Bros. v. Union Oil Co. of Calif., 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). Since Seppanen (IEEE, 1993) fails to disclose, either explicitly or implicitly, at least the above-noted features recited in independent claims 37 and 41, Seppanen (IEEE, 1993) cannot anticipate these claims. At least in view of the foregoing, claims 37 and 41 are allowable, and the rejection should not be sustained. Claims 38-

40, depending from claim 37 and claims 42-50 depending from claim 41, are allowable as depending from allowable base claims, as well as the additional features they recite, particularly within the claimed combination. Accordingly, a *prima facie* case of anticipation has not been established, and the rejection should not be sustained.

Furthermore, the rejection is not phrased in such a manner that can be interpreted as a proper rejection. The Examiner has not identified all the elements in the claims 37-50, nor has the Examiner shown, with specificity, where in the reference each element of the claims are allegedly disclosed. The Office Action states “See particularly: abstract; and pp. 838-844.” However, the abstract and pp. 838-844 represent the entire reference! It is incumbent upon the Examiner to identify where in the reference each element may be found. Ex parte Levy, 17 U.S.P.Q.2d 1461 (BPAI 1990). Referring to the entire publication is **NOT** a showing of specificity within the reference. Accordingly, this rejection is improper, and should not be sustained.

(iii)(4) 35 U.S.C. §102

Wiwakanond et al. (IEEE – 1996) disclose the development of two different kanban-based simulators. The first simulator is based on make-to-stock, the other made-to-order. Kanbans are generated and output.

Wiwakanond et al. does not disclose, teach or suggest a simulator that simulates operation of the production line and determines validity of the electronic kanban, the simulator receiving as input the electronic kanban from the production scheduling model and production line feedback data from the database. Additionally, Wiwakanond et al. does not disclose, teach or suggest determining the validity of the kanban by the simulator, nor the output of the kanban following determination of its validity by the simulator.

A document can only anticipate a claim if the document discloses, explicitly or implicitly, each and every feature recited in the claim. Verdegall Bros. v. Union Oil Co. of Calif., 814 F.2d

628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). Since Wiwakanond et al. fails to disclose, either explicitly or implicitly, at least the above-noted features recited in independent claims 37 and 41, Wiwakanond et al. cannot anticipate these claims. At least in view of the foregoing, claims 37 and 41 are allowable, and the rejection should not be sustained. Claims 38-40, depending from claim 37 and claims 42-50 depending from claim 41, are allowable as depending from allowable base claims, as well as the additional features they recite, particularly within the claimed combination. Accordingly, a *prima facie* case of anticipation has not been established, and the rejection should not be sustained.

Furthermore, the rejection is not phrased in such a manner that can be interpreted as a proper rejection. The Examiner has not identified all the elements in the claims 37-50, nor has the Examiner shown, with specificity, where in the reference each element of the claims are allegedly disclosed. The Office Action states “See particularly: entire disclosure.” (Emphasis added.) It is incumbent upon the Examiner to identify where in the reference each element may be found. Ex parte Levy, 17 U.S.P.Q.2d 1461 (BPAI 1990). Referring to the entire publication is **NOT** a showing of specificity within the reference. Accordingly, this rejection is improper, and should not be sustained.

(iii)(5) 35 U.S.C. §102

Corbett et al. (1993 Winter Sim. Proc.) is a review paper, that is, one that reviews papers, in this instance, modeling of just-in-time, or kanban systems. The Office Action, at paragraph 15, states “See particularly … list of references.” This rejection as improper, as well as a blatant attempt by the Examiner to introduce and apply numerous references not of record. Appellant previously requested that these references be supplied and addressed individually, with particularity. This request was never acted upon by the Examiner.

Furthermore, a §102 rejection for anticipation “…requires the disclosure in a single prior art reference of each element of the claim under consideration.” W.L. Gore & Assocs. v.

Garlock, 721 F.2d 1540, 220 USPQ 303, 313 (Fed. Cir. 1983), cert. denied, 469 U.S. 851 (1984) (citing Soundscriber Corp. v. United States, 360 F.2d 954, 960, 148 USPQ 298, 301 (Ct. Cl.), adopted, 149 USPQ 640 (Ct. Cl. 1966)). See also Carella v. Starlight Archery, 804 F.2d 135, 138, 231 USPQ 644, 646 (Fed. Cir.), modified on reh'g, 1 USPQ 2d 1209 (Fed. Cir. 1986); RCA Corp. v. Applied Digital Data Sys., Inc., 730 F.2d 1440, 1444, 221 USPQ 385, 388 (Fed. Cir. 1984).

As a review paper, Corbett et al. does not disclose or teach anything. According to the abstract, "The objective of this paper is ... to critically review selected papers, ... highlight their approach, point out deficiencies, ... and suggest new directions for research." At best, Corbett et al. suggests further research, and no details are presented because of the nature of the article. As acknowledged by the examiner during the August 1, 2000 Personal Interview, this reference, along with the other applied art previously of record, addresses a simulation of a kanban, and that the art does not disclose, teach or suggest a separate production model that generates an electronic kanban and a simulator for receiving the electronic kanban and determining the validity of the electronic kanban prior to release of the electronic kanban.

Accordingly, Corbett et al. does not disclose, teach or suggest a simulator that simulates operation of the production line and determines validity of the electronic kanban, the simulator receiving as input the electronic kanban from the production scheduling model and production line feedback data from the database. Additionally, Corbett et al. does not disclose, teach or suggest determining the validity of the kanban by the simulator, nor the output of the kanban following determination of its validity by the simulator.

A document can only anticipate a claim if the document discloses, explicitly or implicitly, each and every feature recited in the claim. Verdegall Bros. v. Union Oil Co. of Calif., 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). Since Corbett et al. fails to disclose, either explicitly or implicitly, at least the above-noted features recited in independent claims 37 and 41, Corbett et al. cannot anticipate these claims. At least in view of the foregoing, claims 37 and 41 are allowable, and the rejection should not be sustained. Claims 38-40, depending from claim 37

and claims 42-50 depending from claim 41, are allowable as depending from allowable base claims, as well as the additional features they recite, particularly within the claimed combination. Accordingly, a *prima facie* case of anticipation has not been established, and the rejection should not be sustained.

Furthermore, the rejection is not phrased in such a manner that can be interpreted as a proper rejection. The Examiner has not identified all the elements in the claims 37-50, nor has the Examiner shown, with specificity, where in the reference each element of the claims are allegedly disclosed. The Office Action states “See particularly... list of references.” It is incumbent upon the Examiner to identify where in the reference each element may be found. Ex parte Levy, 17 U.S.P.Q.2d 1461 (BPAI 1990). Referring to the list of references is NOT a showing of specificity within the reference. Accordingly, this rejection is improper, and should not be sustained.

(iii)(6) 35 U.S.C. §102

Tantry et al. '336 disclose an object-oriented architecture for factory floor management. Factory floor entities are modeled as factory floor objects within a relational database. The database includes a library which contains objects that model all factory elements.

Tantry et al. '336 does not disclose, teach or suggest a simulator that simulates operation of the production line and determines validity of the electronic kanban, the simulator receiving as input the electronic kanban from the production scheduling model and production line feedback data from the database. Additionally, Tantry et al. '336 does not disclose, teach or suggest determining the validity of the kanban by the simulator, nor the output of the kanban following determination of its validity by the simulator.

A document can only anticipate a claim if the document discloses, explicitly or implicitly, each and every feature recited in the claim. Verdegall Bros. v. Union Oil Co. of Calif., 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). Since Tantry et al. '336 fails to disclose, either

explicitly or implicitly, at least the above-noted features recited in independent claims 37 and 41, Tantry et al. '336 cannot anticipate these claims. At least in view of the foregoing, claims 37 and 41 are allowable, and the rejection should not be sustained. Claims 38-40, depending from claim 37 and claims 42-50 depending from claim 41, are allowable as depending from allowable base claims, as well as the additional features they recite, particularly within the claimed combination. Accordingly, a *prima facie* case of anticipation has not been established, and the rejection should not be sustained.

Furthermore, the rejection is not phrased in such a manner that can be interpreted as a proper rejection. The Examiner has not identified all the elements in the claims 37-50, nor has the Examiner shown, with specificity, where in the reference each element of the claims are allegedly disclosed. The Office Action merely presents the abstract in its entirety, and then refers to figs. 1-3 and 5-10; col. 1, line 38 to col. 2, line 46; col. 5, line 45 to col. 9, line 30 and table 1. It is incumbent upon the Examiner to identify where in the reference each element may be found. Ex parte Levy, 17 U.S.P.Q.2d 1461 (BPAI 1990). Referring to the Abstract and various long stretches of the disclosure is NOT a showing of specificity within the reference. Accordingly, this rejection is improper, and should not be sustained.

(iii)(7) 35 U.S.C. §102

Natarajan '628 discloses an automated production dispatch system with feedback control. This system is used after orders are released and production disruption is encountered on the shop floor. The system analyzes the current dispatch rules, using a simulation process, to determine if those rules satisfy management criteria. The system then recommends the rule to be used. If the dispatch rules are interpreted as kanbans, the system only analyzes the kanbans after a problem has occurred on the shop floor.

Natarajan '628 does not disclose, teach or suggest a simulator that simulates operation of the production line and determines validity of the electronic kanban, the simulator receiving as

input the electronic kanban from the production scheduling model and production line feedback data from the database. Additionally, Natarajan '628 does not disclose, teach or suggest determining the validity of the kanban by the simulator prior to release, nor the output of the kanban following determination of its validity by the simulator.

A document can only anticipate a claim if the document discloses, explicitly or implicitly, each and every feature recited in the claim. Verdegall Bros. v. Union Oil Co. of Calif., 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). Since Natarajan '628 fails to disclose, either explicitly or implicitly, at least the above-noted features recited in independent claims 37 and 41, Natarajan '628 cannot anticipate these claims. At least in view of the foregoing, claims 37 and 41 are allowable, and the rejection should not be sustained. Claims 38-40, depending from claim 37 and claims 42-50 depending from claim 41, are allowable as depending from allowable base claims, as well as the additional features they recite, particularly within the claimed combination. Accordingly, a *prima facie* case of anticipation has not been established, and the rejection should not be sustained.

Furthermore, the rejection is not phrased in such a manner that can be interpreted as a proper rejection. The Examiner has not identified all the elements in the claims 37-50, nor has the Examiner shown, with specificity, where in the reference each element of the claims are allegedly disclosed. The Office Action merely presents the abstract in its entirety, and then refers to figs. 2-3; and col. 2, line 26 to col. 3, line 10. It is incumbent upon the Examiner to identify where in the reference each element may be found. Ex parte Levy, 17 U.S.P.Q.2d 1461 (BPAI 1990). Referring to the Abstract and one stretch of the disclosure is NOT a showing of specificity within the reference. Accordingly, this rejection is improper, and should not be sustained.

(iii)(8) 35 U.S.C. §102

Parad '570 discloses a method and apparatus for continuous integrated resource management that supports just-in-time manufacturing. Parad '570 provides a notification of exceptions describing present and prospective resource scheduling in real-time. "Timely and accurate information is used to pinpoint resource bottlenecks and determine the most appropriate action." See col. 5, lines 59-64.

Parad '570 does not disclose, teach or suggest a simulator that simulates operation of the production line and determines validity of the electronic kanban, the simulator receiving as input the electronic kanban from the production scheduling model and production line feedback data from the database. Additionally, Parad '570 does not disclose, teach or suggest determining the validity of the kanban by the simulator prior to release, nor the output of the kanban following determination of its validity by the simulator.

A document can only anticipate a claim if the document discloses, explicitly or implicitly, each and every feature recited in the claim. Verdegall Bros. v. Union Oil Co. of Calif., 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). Since Parad '570 fails to disclose, either explicitly or implicitly, at least the above-noted features recited in independent claims 37 and 41, Parad '570 cannot anticipate these claims. At least in view of the foregoing, claims 37 and 41 are allowable, and the rejection should not be sustained. Claims 38-40, depending from claim 37 and claims 42-50 depending from claim 41, are allowable as depending from allowable base claims, as well as the additional features they recite, particularly within the claimed combination. Accordingly, a *prima facie* case of anticipation has not been established, and the rejection should not be sustained.

Furthermore, the rejection is not phrased in such a manner that can be interpreted as a proper rejection. The Examiner has not identified all the elements in the claims 37-50, nor has the Examiner shown, with specificity, where in the reference each element of the claims are allegedly disclosed. The Office Action merely presents the abstract in its entirety, and then refers

to figs. 1-2, 6, 8-9, 11-12 and 16-19; and col. 2, line 1 to col. 5, line 64. This represents the entire first three sections of Parad '570, including the entire field of the invention, the entire background of the invention, and the entire summary of the invention! It is incumbent upon the Examiner to identify where in the reference each element may be found. Ex parte Levy, 17 U.S.P.Q.2d 1461 (BPAI 1990). Referring to the Abstract, most of the figures, the background of the invention and the summary is NOT a showing of specificity within the reference. Accordingly, this rejection is improper, and should not be sustained.

(iii)(9) 35 U.S.C. §102

Korncoff et al. '447 discloses an exception processor system adapted to receive alarms from a cell controller indicating the occurrence of an unplanned event or that an exception has occurred. The exception processor implements an automated recovery procedure that responds to the alarms, corrects the exception, and returns the cell to normal operation. In other words, the exception processing system "is designed to monitor operation of a manufacturing facility, and to correct and anticipate unplanned events..." See col. 2, lines 39-42.

Korncoff et al. '447 does not disclose, teach or suggest a simulator that simulates operation of the production line and determines validity of the electronic kanban, the simulator receiving as input the electronic kanban from the production scheduling model and production line feedback data from the database. Additionally, Korncoff et al. '447 does not disclose, teach or suggest determining the validity of the kanban by the simulator prior to release, nor the output of the kanban following determination of its validity by the simulator.

A document can only anticipate a claim if the document discloses, explicitly or implicitly, each and every feature recited in the claim. Verdegall Bros. v. Union Oil Co. of Calif., 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). Since Korncoff et al. '447 fails to disclose, either explicitly or implicitly, at least the above-noted features recited in independent claims 37 and 41, Korncoff et al. '447 cannot anticipate these claims. At least in

view of the foregoing, claims 37 and 41 are allowable, and the rejection should not be sustained. Claims 38-40, depending from claim 37 and claims 42-50 depending from claim 41, are allowable as depending from allowable base claims, as well as the additional features they recite, particularly within the claimed combination. Accordingly, a *prima facie* case of anticipation has not been established, and the rejection should not be sustained.

Furthermore, the rejection is not phrased in such a manner that can be interpreted as a proper rejection. The Examiner has not identified all the elements in the claims 37-50, nor has the Examiner shown, with specificity, where in the reference each element of the claims are allegedly disclosed. The Office Action merely presents the abstract in its entirety, and then refers to figs. 1-2, 5, 7 and 12; col. 1, lines 24-46 and col. 2, line 1 to col. 4, line 23. **This represents most of the background and summary sections of Korncoff et al. '447!** It is incumbent upon the Examiner to identify where in the reference each element may be found. Ex parte Levy, 17 U.S.P.Q.2d 1461 (BPAI 1990). Referring to the Abstract, numerous figures, the background of the invention and the summary is NOT a showing of specificity within the reference. Accordingly, this rejection is improper, and should not be sustained.

(iii)(10) 35 U.S.C. §102

Weaver et al. '671 discloses a look-ahead method for determining optimum production schedules for an early production steps by monitoring in-process part queues at subsequent potential bottleneck production steps and controlling the product mix at the early production steps.

Weaver et al. '671 does not disclose, teach or suggest a simulator that simulates operation of the production line and determines validity of the electronic kanban, the simulator receiving as input the electronic kanban from the production scheduling model and production line feedback data from the database. Additionally, Weaver et al. '671 does not disclose, teach or suggest

determining the validity of the kanban by the simulator prior to release, nor the output of the kanban following determination of its validity by the simulator.

A document can only anticipate a claim if the document discloses, explicitly or implicitly, each and every feature recited in the claim. Verdegall Bros. v. Union Oil Co. of Calif., 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). Since Weaver et al. '671 fails to disclose, either explicitly or implicitly, at least the above-noted features recited in independent claims 37 and 41, Weaver et al. '671 cannot anticipate these claims. At least in view of the foregoing, claims 37 and 41 are allowable, and the rejection should not be sustained. Claims 38-40, depending from claim 37 and claims 42-50 depending from claim 41, are allowable as depending from allowable base claims, as well as the additional features they recite, particularly within the claimed combination. Accordingly, a *prima facie* case of anticipation has not been established, and the rejection should not be sustained.

Furthermore, the rejection is not phrased in such a manner that can be interpreted as a proper rejection. The Examiner has not identified all the elements in the claims 37-50, nor has the Examiner shown, with specificity, where in the reference each element of the claims are allegedly disclosed. The Office Action merely presents the abstract in its entirety, and then refers to fig. 3; and col. 1, line 16 to col. 2, line 26. **This represents the entire background section and summary of the invention sections of Weaver '671!** It is incumbent upon the Examiner to identify where in the reference each element may be found. Ex parte Levy, 17 U.S.P.Q.2d 1461 (BPAI 1990). Referring to the Abstract, the background of the invention and the summary is **NOT** a showing of specificity within the reference. Accordingly, this rejection is improper, and should not be sustained.

(iii)(11) 35 U.S.C. §102

Lee et al. '970 discloses "an integrated management system suitable for use for the purposes of managing the distribution to the factory floor as well as the distribution throughout a factory of the information which is required to effectuate the manufacture of products on the factory floor." See col. 5, lines 30-37.

Lee et al. '970 does not disclose, teach or suggest a simulator that simulates operation of the production line and determines validity of the electronic kanban, the simulator receiving as input the electronic kanban from the production scheduling model and production line feedback data from the database. Additionally, Lee et al. '970 does not disclose, teach or suggest determining the validity of the kanban by the simulator prior to release, nor the output of the kanban following determination of its validity by the simulator.

A document can only anticipate a claim if the document discloses, explicitly or implicitly, each and every feature recited in the claim. Verdegall Bros. v. Union Oil Co. of Calif., 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). Since Lee et al. '970 fails to disclose, either explicitly or implicitly, at least the above-noted features recited in independent claims 37 and 41, Lee et al. '970 cannot anticipate these claims. At least in view of the foregoing, claims 37 and 41 are allowable, and the rejection should not be sustained. Claims 38-40, depending from claim 37 and claims 42-50 depending from claim 41, are allowable as depending from allowable base claims, as well as the additional features they recite, particularly within the claimed combination. Accordingly, a *prima facie* case of anticipation has not been established, and the rejection should not be sustained.

Furthermore, the rejection is not phrased in such a manner that can be interpreted as a proper rejection. The Examiner has not identified all the elements in the claims 37-50, nor has the Examiner shown, with specificity, where in the reference each element of the claims are allegedly disclosed. The Office Action merely presents the abstract in its entirety, and then refers to figs. 1, 3-4, 6, 15-16, 18-20 and 23-28; and col. 3, line 60 to col. 6, line 27. **This represents**

one-half of the background section and the entire summary of the invention section of Lee et al. '970! It is incumbent upon the Examiner to identify where in the reference each element may be found. Ex parte Levy, 17 U.S.P.Q.2d 1461 (BPAI 1990). Referring to the Abstract, the background of the invention and the summary is NOT a showing of specificity within the reference. Accordingly, this rejection is improper, and should not be sustained.

(iii)(12) 35 U.S.C. §102

Liberatore et al. (ETFA, 1995) discloses a method of dynamically allocating kanbans in a manufacturing system using finite perturbation analysis. The “online control strategy reacts to unknown changes in the production scenario … by varying the number of kanbans of the different part-type worked by the system. See page 601, last paragraph.

Liberatore et al. does not disclose, teach or suggest a simulator that simulates operation of the production line and determines validity of the electronic kanban, the simulator receiving as input the electronic kanban from the production scheduling model and production line feedback data from the database. Additionally, Liberatore et al. does not disclose, teach or suggest determining the validity of the kanban by the simulator prior to release, nor the output of the kanban following determination of its validity by the simulator.

A document can only anticipate a claim if the document discloses, explicitly or implicitly, each and every feature recited in the claim. Verdegall Bros. v. Union Oil Co. of Calif., 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). Since Liberatore et al. fails to disclose, either explicitly or implicitly, at least the above-noted features recited in independent claims 37 and 41, Liberatore et al. cannot anticipate these claims. At least in view of the foregoing, claims 37 and 41 are allowable, and the rejection should not be sustained. Claims 38-40, depending from claim 37 and claims 42-50 depending from claim 41, are allowable as depending from allowable base claims, as well as the additional features they recite, particularly within the claimed combination. Accordingly, a prima facie case of anticipation has not been established, and the rejection should

not be sustained.

Furthermore, the rejection is not phrased in such a manner that can be interpreted as a proper rejection. The Examiner has not identified all the elements in the claims 37-50, nor has the Examiner shown, with specificity, where in the reference each element of the claims are allegedly disclosed. The Office Action merely presents the abstract in its entirety, and then refers to the introduction portion of the paper. It is incumbent upon the Examiner to identify where in the reference each element may be found. Ex parte Levy, 17 U.S.P.Q.2d 1461 (BPAI 1990). Referring to the Abstract and the Introduction of a paper is NOT a showing of specificity within the reference. Accordingly, this rejection is improper, and should not be sustained.

(iii)(13) 35 U.S.C. §102

Jain et al. (1989 Winter Sim. Proc.) discloses an expert system scheduler to enable manufacturing plants to generate viable schedules given various constraints and demands for flexibility. A factory control system contains current data on customer orders and on the expected material receipts, and a new schedule is generated when the situation warrants a new schedule. See page 932, col. 2, last paragraph to page 933, col. 1, first paragraph. At no point is the validity of the schedule determined by running through a simulator prior to release to the plant floor.

Jain et al. does not disclose, teach or suggest a simulator that simulates operation of the production line and determines validity of the electronic kanban, the simulator receiving as input the electronic kanban from the production scheduling model and production line feedback data from the database. Additionally, Jain et al. does not disclose, teach or suggest determining the validity of the kanban by the simulator prior to release, nor the output of the kanban following determination of its validity by the simulator.

A document can only anticipate a claim if the document discloses, explicitly or implicitly, each and every feature recited in the claim. Verdegall Bros. v. Union Oil Co. of Calif., 814 F.2d

628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). Since Jain et al. fails to disclose, either explicitly or implicitly, at least the above-noted features recited in independent claims 37 and 41, Jain et al. cannot anticipate these claims. At least in view of the foregoing, claims 37 and 41 are allowable, and the rejection should not be sustained. Claims 38-40, depending from claim 37 and claims 42-50 depending from claim 41, are allowable as depending from allowable base claims, as well as the additional features they recite, particularly within the claimed combination. Accordingly, a *prima facie* case of anticipation has not been established, and the rejection should not be sustained.

Furthermore, the rejection is not phrased in such a manner that can be interpreted as a proper rejection. The Examiner has not identified all the elements in the claims 37-50, nor has the Examiner shown, with specificity, where in the reference each element of the claims are allegedly disclosed. The Office Action merely presents the abstract in its entirety, and then refers to figs. 1-2 and sections 2-3 of the paper. It is incumbent upon the Examiner to identify where in the reference each element may be found. Ex parte Levy, 17 U.S.P.Q.2d 1461 (BPAI 1990). Referring to the Abstract and the Introduction of a paper is NOT a showing of specificity within the reference. Accordingly, this rejection is improper, and should not be sustained.

(iii)(14) 35 U.S.C. §102

Roberts et al. (1991 Winter Sim. Proc.) discloses object oriented simulation tools necessary for a flexible batch process management architecture. Two simulation assistants were proposed having the capability of using the plant specifications and modeling knowledge to construct simulation models. The Office Action quotes verbatim section 5 of this reference. When read in view of Fig 1 on page 325, as well as the rest of the reference, this simulator is NOT verifying the validity of a control code, or kanban prior to release. Rather, this simulation assistant is merely processing the changes in system states and maps these states to the generic control code specification. In fact, the simulator is a “virtual plant,” and cannot determine

validity of the control code, or kanban and cannot release the kanban to the manufacturing process.

Roberts et al. does not disclose, teach or suggest a simulator that simulates operation of the production line and determines validity of the electronic kanban, the simulator receiving as input the electronic kanban from the production scheduling model and production line feedback data from the database. Additionally, Roberts et al. does not disclose, teach or suggest determining the validity of the kanban by the simulator prior to release, nor the output of the kanban following determination of its validity by the simulator.

A document can only anticipate a claim if the document discloses, explicitly or implicitly, each and every feature recited in the claim. Verdegall Bros. v. Union Oil Co. of Calif., 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). Since Roberts et al. fails to disclose, either explicitly or implicitly, at least the above-noted features recited in independent claims 37 and 41, Roberts et al. cannot anticipate these claims. At least in view of the foregoing, claims 37 and 41 are allowable, and the rejection should not be sustained. Claims 38-40, depending from claim 37 and claims 42-50 depending from claim 41, are allowable as depending from allowable base claims, as well as the additional features they recite, particularly within the claimed combination. Accordingly, a *prima facie* case of anticipation has not been established, and the rejection should not be sustained.

Furthermore, the rejection is not phrased in such a manner that can be interpreted as a proper rejection. The Examiner has not identified all the elements in the claims 37-50, nor has the Examiner shown, with specificity, where in the reference each element of the claims are allegedly disclosed. The Office Action merely presents the abstract in its entirety, and then refers to figs. 1-2 and sections 2-3 of the paper. It is incumbent upon the Examiner to identify where in the reference each element may be found. Ex parte Levy, 17 U.S.P.Q.2d 1461 (BPAI 1990). Referring to the Abstract and the Introduction of a paper is NOT a showing of specificity within the reference. Accordingly, this rejection is improper, and should not be sustained.

(iii)(15) 35 U.S.C. §102

Umeda (1992 Winter Sim. Proc.) discloses a “virtual plant system” concept that “combines real-time monitoring system with on-line factory simulation....” See page 897 and Fig. 10. The planning system sends plant control information to BOTH the actual plant and the virtual plant. At no point does the virtual plant determine the validity of the control information. Rather, the virtual plant mimics the actual plant.

Umeda does not disclose, teach or suggest a simulator that simulates operation of the production line and determines validity of the electronic kanban, the simulator receiving as input the electronic kanban from the production scheduling model and production line feedback data from the database. Additionally, Umeda does not disclose, teach or suggest determining the validity of the kanban by the simulator prior to release, nor the output of the kanban following determination of its validity by the simulator.

A document can only anticipate a claim if the document discloses, explicitly or implicitly, each and every feature recited in the claim. Verdegall Bros. v. Union Oil Co. of Calif., 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). Since Umeda fails to disclose, either explicitly or implicitly, at least the above-noted features recited in independent claims 37 and 41, Umeda cannot anticipate these claims. At least in view of the foregoing, claims 37 and 41 are allowable, and the rejection should not be sustained. Claims 38-40, depending from claim 37 and claims 42-50 depending from claim 41, are allowable as depending from allowable base claims, as well as the additional features they recite, particularly within the claimed combination. Accordingly, a prima facie case of anticipation has not been established, and the rejection should not be sustained.

Furthermore, the rejection is not phrased in such a manner that can be interpreted as a proper rejection. The Examiner has not identified all the elements in the claims 37-50, nor has the Examiner shown, with specificity, where in the reference each element of the claims are allegedly disclosed. The Office Action recites Section 6 of this paper verbatim and in its

entirety, and then refers to a figure on page 892, section 2.4, and section 6 again. It is incumbent upon the Examiner to identify where in the reference each element may be found. Ex parte Levy, 17 U.S.P.Q.2d 1461 (BPAI 1990). Referring to two sections and a figure of a paper is NOT a showing of specificity within the reference. Accordingly, this rejection is improper, and should not be sustained.

(iii)(16) 35 U.S.C. §102

Bouchentouf-Idriss et al. discloses designing a kanban manufacturing system using a server network generator CASE tool. Bouchentouf-Idriss et al. offers a long discussion on what kanban is, and how a manufacturing floor responds to the kanban.

Bouchentouf-Idriss et al. do not disclose, teach or suggest a simulator that simulates operation of the production line and determines validity of the electronic kanban, the simulator receiving as input the electronic kanban from the production scheduling model and production line feedback data from the database. Additionally, Bouchentouf-Idriss et al. do not disclose, teach or suggest determining the validity of the kanban by the simulator prior to or following release, nor the output of the kanban following determination of its validity by the simulator.

A document can only anticipate a claim if the document discloses, explicitly or implicitly, each and every feature recited in the claim. Verdegall Bros. v. Union Oil Co. of Calif., 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). Since Bouchentouf-Idriss et al. fails to disclose, either explicitly or implicitly, at least the above-noted features recited in independent claims 37 and 41, Bouchentouf-Idriss et al. cannot anticipate these claims. At least in view of the foregoing, claims 37 and 41 are allowable, and the rejection should not be sustained. Claims 38-40, depending from claim 37 and claims 42-50 depending from claim 41, are allowable as depending from allowable base claims, as well as the additional features they recite, particularly within the claimed combination. Accordingly, a prima facie case of anticipation has not been established, and the rejection should not be sustained.

Furthermore, the rejection is not phrased in such a manner that can be interpreted as a proper rejection. The Examiner has not identified all the elements in the claims 37-50, nor has the Examiner shown, with specificity, where in the reference each element of the claims are allegedly disclosed. The Office Action merely presents the abstract in its entirety, and then refers to 62-68 of the paper. **Since the text and figures of this paper runs from pages 62-69, this represents almost the entire article!** It is incumbent upon the Examiner to identify where in the reference each element may be found. Ex parte Levy, 17 U.S.P.Q.2d 1461 (BPAI 1990). Referring to essentially the entire article is NOT a showing of specificity within the reference. Accordingly, this rejection is improper, and should not be sustained.

(iii)(17) 35 U.S.C. §102

Harmonosky (1995 Winter Sim. Proc.) is a review paper, that is, one that reviews papers, in this instance, simulation-based real-time scheduling: review of recent developments. Appellant has objected to this rejection as improper, as well as a blatant attempt by the examiner to introduce and apply numerous references not of record. Appellant previously requested that these references be supplied and addressed individually, and with particularity. This request was never acted upon by the Examiner.

Furthermore, a §102 rejection for anticipation "...requires the disclosure in a single prior art reference of each element of the claim under consideration." W.L. Gore & Assocs. v. Garlock, 721 F.2d 1540, 220 USPQ 303, 313 (Fed. Cir. 1983), cert. denied, 469 U.S. 851 (1984) (citing Soundscriber Corp. v. United States, 360 F.2d 954, 960, 148 USPQ 298, 301 (Ct. Cl.), adopted, 149 USPQ 640 (Ct. Cl. 1966)). See also Carella v. Starlight Archery, 804 F.2d 135, 138, 231 USPQ 644, 646 (Fed. Cir.), modified on reh'g, 1 USPQ 2d 1209 (Fed. Cir. 1986); RCA Corp. v. Applied Digital Data Sys., Inc., 730 F.2d 1440, 1444, 221 USPQ 385, 388 (Fed. Cir. 1984).

Accordingly, this is an improper §102 rejection and should not be sustained.

As a review paper, Harmonosky does not disclose or teach anything. According to the abstract, "This paper reviews recent developments using simulation as a tool in real-time scheduling." At best, this reference shows that the kanban is released to the physical system without going to a simulator to test for validity.

As a review paper, Harmonosky does not disclose or teach anything. According to the abstract, "This paper reviews recent developments using simulation as a tool in real-time scheduling." At best, Harmonosky suggests that "this work needs to be implemented and tested...." As acknowledged by the examiner during the August 1, 2000 Personal Interview, this reference, along with the other applied art previously of record, addresses a simulation of a kanban, and that the art does not disclose, teach or suggest a separate production model that generates an electronic kanban and a simulator for receiving the electronic kanban and determining the validity of the electronic kanban prior to release of the electronic kanban.

Accordingly, Harmonosky does not disclose, teach or suggest a simulator that simulates operation of the production line and determines validity of the electronic kanban, the simulator receiving as input the electronic kanban from the production scheduling model and production line feedback data from the database. Additionally, Harmonosky does not disclose, teach or suggest determining the validity of the kanban by the simulator prior to release, nor the output of the kanban following determination of its validity by the simulator.

A document can only anticipate a claim if the document discloses, explicitly or implicitly, each and every feature recited in the claim. Verdegall Bros. v. Union Oil Co. of Calif., 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). Since Harmonosky fails to disclose, either explicitly or implicitly, at least the above-noted features recited in independent claims 37 and 41, Harmonosky cannot anticipate these claims. At least in view of the foregoing, claims 37 and 41 are allowable, and the rejection should not be sustained. Claims 38-40, depending from claim 37 and claims 42-50 depending from claim 41, are allowable as depending from allowable base claims, as well as the additional features they recite, particularly within the claimed combination.

Accordingly, a *prima facie* case of anticipation has not been established, and the rejection should not be sustained.

Furthermore, the rejection is not phrased in such a manner that can be interpreted as a proper rejection. The Examiner has not identified all the elements in the claims 37-50, nor has the Examiner shown, with specificity, where in the reference each element of the claims are allegedly disclosed. The Office Action merely presents sections 2.0 and 2.1 of this article, almost verbatim! It is incumbent upon the Examiner to identify where in the reference each element may be found. Ex parte Levy, 17 U.S.P.Q.2d 1461 (BPAI 1990). Referring to two sections of an article that in turn introduces no less than three other references is NOT a showing of specificity within the reference. Accordingly, this rejection is improper, and should not be sustained.

(iii)(18) 35 U.S.C. §102

Marriott (1994 Winter Sim. Proc.) is a tutorial article on the use of a particular simulation-based finite capacity scheduling system called PROVISA. Simulation based modeling is discussed, whereby the simulation model and the scheduler interact in an overall scheduling system. There is no separate simulator of the production line that can receive the output of the schedule generator. Output of the schedule generator is analyzed “through generated reports, and the Comparison and Planning Board modules.”

Marriott does not disclose, teach or suggest a simulator that simulates operation of the production line and determines validity of the electronic kanban, the simulator receiving as input the electronic kanban from the production scheduling model and production line feedback data from the database. Additionally, Marriott does not disclose, teach or suggest determining the validity of the kanban by the simulator prior to release, nor the output of the kanban following determination of its validity by the simulator.

A document can only anticipate a claim if the document discloses, explicitly or implicitly, each and every feature recited in the claim. Verdegall Bros. v. Union Oil Co. of Calif., 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). Since Marriott fails to disclose, either explicitly or implicitly, at least the above-noted features recited in independent claims 37 and 41, Marriott cannot anticipate these claims. At least in view of the foregoing, claims 37 and 41 are allowable, and the rejection should not be sustained. Claims 38-40, depending from claim 37 and claims 42-50 depending from claim 41, are allowable as depending from allowable base claims, as well as the additional features they recite, particularly within the claimed combination. Accordingly, a *prima facie* case of anticipation has not been established, and the rejection should not be sustained.

Furthermore, the rejection is not phrased in such a manner that can be interpreted as a proper rejection. The Examiner has not identified all the elements in the claims 37-50, nor has the Examiner shown, with specificity, where in the reference each element of the claims are allegedly disclosed. The Office Action merely recites the text of sections 1.1, 2 and 3 of this article, almost verbatim! It is incumbent upon the Examiner to identify where in the reference each element may be found. Ex parte Levy, 17 U.S.P.Q.2d 1461 (BPAI 1990). Referring to three sections of an article is NOT a showing of specificity within the reference. Accordingly, this rejection is improper, and should not be sustained.

(iii)(19) 35 U.S.C. §102

Krishnamurthi et al. (1993 Winter Sim. Proc.) is cited and applied to disclose “the state of the prior art regarding on-line simulation in section 2.” Office Action at para. 29. Appellant objects to this rejection as improper, as well as a blatant attempt by the Examiner to introduce and apply no less than seven references not of record. Applicant previously requested that these references be supplied and addressed individually, and with particularity. This request was never acted upon by the Examiner.

Furthermore, a §102 rejection for anticipation "...requires the disclosure in a single prior art reference of each element of the claim under consideration." W.L. Gore & Assocs. v. Garlock, 721 F.2d 1540, 220 USPQ 303, 313 (Fed. Cir. 1983), cert. denied, 469 U.S. 851 (1984) (citing Soundscriber Corp. v. United States, 360 F.2d 954, 960, 148 USPQ 298, 301 (Ct. Cl.), adopted, 149 USPQ 640 (Ct. Cl. 1966)). See also Carella v. Starlight Archery, 804 F.2d 135, 138, 231 USPQ 644, 646 (Fed. Cir.), modified on reh'g, 1 USPQ 2d 1209 (Fed. Cir. 1986); RCA Corp. v. Applied Digital Data Sys., Inc., 730 F.2d 1440, 1444, 221 USPQ 385, 388 (Fed. Cir. 1984).

Accordingly, this is an improper §102 rejection and should not be sustained.

Section 2.1 in Krishnamurthi et al. discusses on-line simulation for real time scheduling as discussed in the "existing literature," generally consisting of "a data acquisition model, a simulation model and a control program." However, there is no discussion in Krishnamurthi et al. of a separate simulator that receives scheduling output and determines validity.

Accordingly, Krishnamurthi et al. do not disclose, teach or suggest a simulator that simulates operation of the production line and determines validity of the electronic kanban, the simulator receiving as input the electronic kanban from the production scheduling model and production line feedback data from the database. Additionally, Krishnamurthi et al. do not disclose, teach or suggest determining the validity of the kanban by the simulator prior to release, nor the output of the kanban following determination of its validity by the simulator.

A document can only anticipate a claim if the document discloses, explicitly or implicitly, each and every feature recited in the claim. Verdegall Bros. v. Union Oil Co. of Calif., 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). Since Krishnamurthi et al. fail to disclose, either explicitly or implicitly, at least the above-noted features recited in independent claims 37 and 41, Krishnamurthi et al. cannot anticipate these claims. At least in view of the foregoing, claims 37 and 41 are allowable, and the rejection should not be sustained. Claims 38-40, depending from claim 37 and claims 42-50 depending from claim 41, are allowable as depending from allowable base claims, as well as the additional features they recite, particularly within the

claimed combination. Accordingly, a *prima facie* case of anticipation has not been established, and the rejection should not be sustained.

Furthermore, the rejection is not phrased in such a manner that can be interpreted as a proper rejection. The Examiner has not identified all the elements in the claims 37-50, nor has the Examiner shown, with specificity, where in the reference each element of the claims are allegedly disclosed. The Office Action merely presents sections 2, 2.1 and 2.2 of this article, almost verbatim! It is incumbent upon the Examiner to identify where in the reference each element may be found. Ex parte Levy, 17 U.S.P.Q.2d 1461 (BPAI 1990). Referring to three sections of an article that in turn introduces no less than seven other references is NOT a showing of specificity within the reference. Accordingly, this rejection is improper, and should not be sustained.

(iii)(20) 35 U.S.C. §102

Manivannan et al. (1991 Winter Sim. Proc.) discloses real-time control of a manufacturing cell using knowledge-based simulation. The framework integrates data collection devices with a dynamic knowledge base and a simulation model. Feedback data is used to generate control output back to the manufacturing cell. See Figs 1 and 6, and section 3.1.

Manivannan et al. do not disclose, teach or suggest a simulator that simulates operation of the production line and determines validity of the electronic kanban, the simulator receiving as input the electronic kanban from the production scheduling model and production line feedback data from the database. Additionally, Manivannan et al. do not disclose, teach or suggest determining the validity of the kanban by the simulator prior to release, nor the output of the kanban following determination of its validity by the simulator.

A document can only anticipate a claim if the document discloses, explicitly or implicitly, each and every feature recited in the claim. Verdegall Bros. v. Union Oil Co. of Calif., 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). Since Manivannan et al. fails to disclose,

either explicitly or implicitly, at least the above-noted features recited in independent claims 37 and 41, Manivannan et al. cannot anticipate these claims. At least in view of the foregoing, claims 37 and 41 are allowable, and the rejection should not be sustained. Claims 38-40, depending from claim 37 and claims 42-50 depending from claim 41, are allowable as depending from allowable base claims, as well as the additional features they recite, particularly within the claimed combination. Accordingly, a *prima facie* case of anticipation has not been established, and the rejection should not be sustained.

Furthermore, the rejection is not phrased in such a manner that can be interpreted as a proper rejection. The Examiner has not identified all the elements in the claims 37-50, nor has the Examiner shown, with specificity, where in the reference each element of the claims are allegedly disclosed. The Office Action merely presents the abstract in its entirety, and refers to figs. 1 and 6. It is incumbent upon the Examiner to identify where in the reference each element may be found. Ex parte Levy, 17 U.S.P.Q.2d 1461 (BPAI 1990). **Referring only to the abstract and two figures of an article is NOT a showing of specificity within the reference.** Accordingly, this rejection is improper, and should not be sustained.

(iv) 35 U.S.C. §103

None.

(v) Other

None

IX. Conclusion

In view of the foregoing reasons, Appellant submits that the final rejection of claims 37-50 is improper and should not be sustained. Therefore, a reversal of the Final Rejection of January 3, 2001, as to claims 37-50, is respectfully requested.

Respectfully submitted,

DATE: May 31, 2001


Ronald P. Kananen
Reg. No. 24,104

Robert S. Green
Reg. No. 41,800

RADER, FISHMAN & GRAUER, PLLC
Lion Building
1233 20th Street, N.W.
Washington, D.C. 20036
Tel: (202) 955-3750
Fax: (202) 955-3751
Customer No. 23353

X. Appendix
Claims on Appeal

37. A system for controlling a manufacturing production line using a virtual kanban system comprising:

a production scheduling model that includes a virtual kanban system, wherein the virtual kanban system outputs an electronic kanban, the electronic kanban representing a production routing schedule;

a database that stores the production scheduling model and production line feedback data, the production line feedback data further comprising a first data set that specifies equipment in the production line and a second data set that specifies at least one of operating status of the equipment, product lots status and production inputs status;

a simulator that simulates operation of the production line and determines validity of said electronic kanban, said simulator receiving as input the electronic kanban from the production scheduling model and the production line feedback data from the database, the simulator further comprising a user interface;

wherein when the electronic kanban is determined valid by the simulator, the electronic kanban is output and a work schedule is generated.

38. The system for controlling a manufacturing production line of claim 37, wherein said user interface is a graphical user interface.

39. The system for controlling the manufacturing production line of claim 37, wherein when the simulator determines that the electronic kanban is invalid, a user is notified.

40. The system for controlling the manufacturing production line of claim 37, wherein

a kanban work schedule parameter based on the electronic kanban for each piece of said equipment in the production line which uses a production input is generated.

41. A method for controlling a manufacturing production line using a virtual kanban system, the method comprising the steps of:

storing production line feedback data in a database;

inputting said feedback data into a production scheduling model that includes the virtual kanban system and generating an electronic kanban;

inputting the electronic kanban and the feedback data to a simulator and simulating the manufacturing production line; and

determining the validity of the electronic kanban;

wherein the feedback data comprises a first data set specifying a type of equipment in the production line and a second data set specifying at least one of operating status of equipment, product lot status and production inputs status.

42. The method of claim 41, wherein the feedback data is continuously updated.

43. The method of claim 41, wherein upon determination that the electronic kanban is invalid, further comprising the step of notifying a user.

44. The method of claim 41, further comprising the step of monitoring the consumption of production inputs.

45. The method of claim 41, further comprising the step of ordering production inputs using the electronic kanban.

46. The method of claim 41, further comprising the step of updating the second data

set at a predetermined time interval.

47. The method of claim 46, wherein the predetermined time interval is 3 hours.

48. The method of claim 46, further comprising the steps of:
inputting the updated second data set into the production scheduling model; and
generating a revised electronic kanban.

49. The method of claim 48, further comprising the steps of:
inputting the revised electronic kanban and the updated feedback data set into the simulator; and
simulating the manufacturing production line.

50. The method of claim 49, further comprising the step of determining the validity of the revised electronic kanban.